

## REMARKS

### I. Introduction

The Office Action mailed July 7, 2010, has been carefully considered. The present Response is intended to be a complete response thereto and to place the case in condition for allowance.

### II. Status of the Claims

Claims 1-12 and 14-20 are pending. Claims 1, 7, and 14 have been cancelled.

### III. Summary of the Office Action

In the Office Action the Examiner rejected claims 1-12 and 14-20 under 35 U.S.C. § 103(a) as being obvious over Kydd (U.S. Patent No. 5,882,722).

### IV. Arguments

Claims 1-6 stand rejected as being obvious over Kydd. Applicants respectfully traverse the rejection.

In the Office Action, the Examiner alleges that Kydd does not disclose a binder; however, Kydd discloses the composition of the '244 patent which contains an ethyl cellulose binder. The Examiner, thus, concludes that

it would have been obvious to use the vehicle of the '244 patent with the dispersant and silver particles of Kydd, since both references teach similar compounds and the vehicle of the '244 patent would make handling of the silver particles of Kydd more manageable.

Office Action at 4.

First, Applicants respectfully submit that neither Kydd nor the ‘244 patent discloses a binder that has a temperature of volatilization below the sintering temperature of the metal. The Examiner alleges that ethyl cellulose “has a volatilization temperature below the metal powder’s sintering temperature.” Office Action at 3. Applicants respectfully request that the Examiner provide documentary evidence or sound technical and scientific reasoning to support that assertion. *See* MPEP 2144.03. Applicants respectfully submit that it is not well-known or common knowledge that ethyl cellulose has a volatilization temperature below silver’s (the metal used in the ‘244 patent) sintering temperature. The Examiner has asserted that cellulose has a volatilization temperature below the sintering temperature of silver without any supporting evidence or scientific reasoning. That is contrary to the instruction of MPEP 2144.03.

Nevertheless, in the interest of compact prosecution, Applicants have conducted experiments to determine the volatilization temperature of ethyl cellulose. A Declaration Under 37 C.F.R. § 1.132 is filed herewith to present the data obtained from those experiments. The data shows that the volatilization temperature of ethyl cellulose is 450°C. The sintering temperature of the metal particles of the present invention is below 300°C. Therefore, the volatilization temperature of ethyl cellulose is not “below the metal powder’s sintering temperature” as alleged by the Examiner. Office Action at 3.

Second, Applicants respectfully submit that one of ordinary skill in the art, reading the teachings of Kydd, would never combine the composition of Kydd with that of the ‘244 patent. Kydd completely disparages the composition of the ‘244 patent, averring that the conductivity of that composition “is a thousand fold less than required for practical circuits.” Column 5, lines 42-44. Additionally, Kydd discloses that the resistance of the composition of the ‘244 patent is “too high for practical circuitry which typically has traces with lengths of many hundreds of squares.”

Column 5, lines 60-64. As such, Kydd has no intention of combining his composition with that of the '244 patent. To do so would be contrary to the teaching of Kydd.

The Examiner further alleges that one of ordinary skill in the art would "use the vehicle of the '244 patent with the dispersant and silver particles of Kydd" to "make handling of the silver particles of Kydd more manageable." Office Action at 4. Why would one of ordinary skill in the art use the carrier of the '244 patent to facilitate ease of handling (as alleged by the Examiner) at the cost of increasing the resistance and making the compound incompatible for its intended purpose? The composition of Kydd is used to make electrical circuitry where low resistance is important. One of ordinary skill in the art, when reading Kydd, would never combine the teachings of Kydd with those of the '244 patent, because to do so would likely render the resistance "too high for practical circuitry." Column 5, lines 60-64.

Therefore, for the reasons noted, the present invention is not obvious over Kydd. Accordingly, Applicants respectfully request withdrawal of the rejection.

#### **V. Conclusion**

Applicants have responded to the Office Action mailed July 7, 2010. All pending claims are now believed to be allowable and favorable action is respectfully requested.

In the event that there are any questions relating to this Response or to the application in general, it would be appreciated if the examiner would telephone the undersigned attorney concerning such questions so that the prosecution of this application may be expedited.

Please charge any shortage or credit any overpayment of fees to BLANK ROME LLP, Deposit Account No. 23-2185 (124617-00118). In the event that a petition for an extension of time is required to be submitted herewith and in the event that a separate petition does not

accompany this response, Applicants hereby petition under 37 C.F.R. 1.136(a) for an extension of time for as many months as are required to render this submission timely.

Any fees due are authorized above.

Respectfully submitted,

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